AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No.: 10/617,210

Attorney Docket No.: Q76413

AMENDMENTS TO THE SPECIFICATION

Please replace page 8, ~~line 26 page 9~~, line 3 with the following amended paragraph: lines 16-20

yr 5/3/2010

Said advanced variants lead to calculations of a so-called cross term C_t and energy term E_t for t-th code vector c_t. The value of a ratio C_t/E_t which is used as a performance measure for the t-th code vector is the higher _or_ the lower _of_ a corresponding error energy P_e_t characterizing the code vector c_t is. The ratio C/E is used to compare code vectors within said codebook search.

AMENDMENTS TO THE SPECIFICATION

third

Please delete the present ~~second~~ full paragraph, appearing on lines ~~10-15~~, 30-34 on page ~~9~~ 8   _yr_ _5/3/2010_

of the specification and replace it with the following new paragraph.

To carry out said comparison and to store indices of code vectors already processed,

precalculations yielding said cross multiplication expression for each code vector c_t - according

to the invention - are carried out in parallel by using specifically designed calculation ~~unit~~ units 4

of a specifically designed digital signal processor (DSP) 1 or coder/decoder 6, with configurable

hardware 5. Postcalculations after performing said comparison are also performed in parallel.

third

Please delete the present sixth full paragraph, appearing on lines ~~25-27~~ 15-17, on page 7 of *YR 5/3/2010*

the specification and replace it with the following new paragraph.

For each of said two codebook groups CB_0, CB_1, an optimal group code vector is

determined in parallel by simultaneously performing a codebook search in the respective

codebook group CB_0, CB_1 with an acceleration module 3.

Please delete the present second full paragraph, appearing on lines 10-15, on page 9

of the specification and replace it with the following new paragraph.

To carry out said comparison and to store indices of code vectors already processed,

precalculations yielding said cross multiplication expression for each code vector c_t - according

to the invention - are carried out in parallel by using specifically designed calculation ~~units~~ unit 4

of a specifically designed digital signal processor (DSP) 1 or coder/decoder 6, with configurable

hardware 5. Postcalculations after performing said comparison are also performed in parallel.

Second

Please delete the present ~~fourth~~ full paragraph, appearing on lines ~~19-20~~ 5-6, on page 9 *YR 5/3/2010*

of the specification and replace it with the following new paragraph.

The corresponding computer program controlling the DSP 1 is optimized with respect to

parallelism of calculations.

first

Please delete the present ~~sixth~~ full paragraph, appearing on lines ~~24-28~~ 7-11, on page 10 *YR 5/3/2010*

of the specification and replace it with the following new paragraph.

The signal values of said speech signal s and of said elements of said auto-correlation matrices are represented by 16 bit data words, and since a 64 bit memory read instruction, which is stored in memory 2, is provided by the DSP 1, four signal values located in a memory of said DSP 1 are accessed simultaneously which ensures that even in case of simultaneous evaluation of a plurality of signal values input data is always available.

                              second   13-15   10   YR 5|3|2010
Please delete the present first full paragraph, appearing on lines 2-4, on page 11 of the specification and replace it with the following new paragraph.

The DSP 1 also has acceleration means implemented on a hardware basis which are specifically designed to evaluate complex expressions that are to be computed repeatedly within few machine cycles.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 11/18/2009, the applicant has submitted an

amendment after final, filed 2/18/2010, amending independent claims 1 and 7 to incorporate

subject matter previously indicated as being allowable over the prior art of record *(Amendment,*

Page 10). As such, claims 1, 3, 5-9, 11, 13, 15-18, 20, and 23 are allowable over the prior art of

record for the below noted reasons.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

        Authorization for this examiner's amendment was given in a telephone interview with

Ebenesar Thomas *(Reg. No. 62,499)* on 3/12/2010.

3.   The application has been amended as follows:
                          decoder, capable   YK 5/3/2010
        In claim 11, change "coder and ~~decoder capable~~ of performing" to –coder and decoder

that performs--.